COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
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GAIL FARBER, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

October 13, 2009

ADOPTED
BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES
20 October 13, 2009
SACHI A. HAMAI
EXECUTIVE OFFICER

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

ARROYO SECO CHANNEL REPAIR PROJECT MITIGATED NEGATIVE DECLARATION AND AUTHORITY TO PROCEED TO REPAIR ARROYO SECO CONCRETE CHANNEL IN THE COMMUNITIES OF PASADENA, SOUTH PASADENA, CYPRESS PARK, MONTECITO HEIGHTS, AND HIGHLAND PARK
(SUPERVISORIAL DISTRICTS 1 AND 5)
(3 VOTES)

SUBJECT

Adopt the Mitigated Negative Declaration and the Mitigation Monitoring and Reporting Program for the Arroyo Seco Channel repair project, approve the project, and authorize the Department of Public Works to proceed with the project.

IT IS RECOMMENDED THAT YOUR BOARD ACTING AS THE GOVERNING BODY OF THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

1. Consider the Mitigated Negative Declaration for the proposed project to repair Arroyo Seco Channel together with any comments received during the public review period; find that the Mitigated Negative Declaration reflects the independent judgment and analysis of your Board; adopt the Mitigation Monitoring and Reporting Program, finding that the Mitigation Monitoring and Reporting Program is adequately designed to ensure compliance with the mitigation measures during project implementation; find on the basis of the whole record before your Board that there is no substantial evidence the project will have a significant effect on the environment; and adopt the Mitigated Negative Declaration.

2. Approve the project and authorize the Director of the Department of Public Works or her designee to proceed with the preconstruction phase of the project, including approval of design plans and obtaining all necessary permits.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Approval of the recommended actions will adopt the enclosed Mitigated Negative Declaration (MND-Enclosure A) and the Mitigation Monitoring and Reporting Program (Enclosure B) and authorize the Department of Public Works (Public Works) to proceed with this project to repair Arroyo Seco Channel from the Los Angeles River to the debris dam near the Foothill Freeway.

Implementation of Strategic Plan Goals

The Countywide Strategic Plan directs the provision of Community Services (Goal 3). This action will preserve the structural integrity, maintain the effectiveness of the flood control facilities, and thereby enhance flood protection for the County of Los Angeles (County) residents.

FISCAL IMPACT/FINANCING

There will be no impact to the County General Fund.

The total project cost is estimated at $1,500,000. A construction contract will be advertised for bids at a later date, contingent upon your Board's approval of this action. Funding for this project is included in the Fiscal Year 2009-10 Flood Control District Fund Budget.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

The purpose of the project is to repair the Arroyo Seco Channel from the Los Angeles River to the debris dam near the Foothill Freeway. These repairs are necessary to correct damage from erosion that could potentially allow water to undermine the channel bottom and levees.

An environmental impact analysis/documentation is a California Environmental Quality Act (CEQA) requirement that is to be used in evaluating the environmental effects of this project and should be considered in the approval of this project. As the project administrator, Public Works is also the lead agency in terms of meeting the requirements of CEQA.

In accordance with the Environmental Document Reporting Procedures and Guidelines adopted by your Board on November 17, 1987, an Initial Study of Environmental Factors (Initial Study) and an MND were prepared and circulated for public review. The Initial Study indicated that the proposed project would not have a significant effect on the environment with the incorporation of mitigation measures. Therefore, adoption of the MND is recommended.

ENVIRONMENTAL DOCUMENTATION

The Initial Study was prepared for this project in compliance with CEQA. The Initial Study identified potential significant effects of the project on cultural resources. Prior to the release of the proposed Initial Study and MND for public review, revisions to the project were made or agreed to that would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur as follows:

Cultural Resources: The Arroyo Seco Channel is eligible for the National Register as a historic resource. This channel is a historically significant structure that is associated with the development of the Los Angeles Basin. Because of the historical significance of the Arroyo Seco Channel and proposed alterations to this resource, a Memorandum of Agreement between the California Office of Historic Preservation and the U.S. Army Corps of Engineers specifies that the potential historic impacts of the project require a Historic American Engineering Record to mitigate repairs and replacement of concrete in the Arroyo Seco Channel by documenting its historical significance and structural and design characteristics. The National Park Service Historic American Building Survey and Historic American Engineering Record program documents important architectural, engineering, and industrial sites with measured drawings, large-format photographs, and a written history. Prior to project construction, Public Works shall submit a Historic American Engineering Record to the California Office of Historic Preservation and the U.S. Army Corps of Engineers for approval.

The Initial Study and project revisions showed that there is no substantial evidence, in light of the whole record before the County, that the project as revised may have a significant effect on the environment. Based on the Initial Study and project revisions, an MND was prepared for this project. Public notice was published in La Cañada Valley Sun and Northeast Sun on June 25, 2009, pursuant to Public Resources Code Section 21092. Copies of the draft Negative Declaration were provided for public review to the following County public libraries: Lincoln Heights Branch, Pasadena Central, and South Pasadena, and was available at our headquarters building in Alhambra. Notices regarding the availability of the draft MND were also mailed to residents within the vicinity of the project. There were no organizations or individuals who previously requested notice. Comments were received from one resident, and our response is included in Section 6 of the MND.

The location of the documents and other materials constituting the record of the proceedings upon which your Board's decision is based in this matter is Public Works, Programs Development Division, 900 South Fremont Avenue, 11th Floor, Alhambra, California 91803. The custodian of such documents and materials is the Environmental Planning and Assessments Section of Public Works.

The Department of Fish and Game has determined that for purposes of the assessment of CEQA filing fees, Section 711.4(c) of the Fish and Game Code, the project has no potential effect on fish, wildlife, and habitat and does not require payment of a CEQA filing fee. The "CEQA Filing Fee No Effect Determination Form" was approved by the Department of Fish and Game on August 31, 2009. Upon your Board's approval of the MND, Public Works will file a Notice of Determination in accordance with Section 21152(a) of the California Public Resources Code and pay the required filing fee of $75 to the Registrar-Recorder/County Clerk.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

The proposed project will facilitate maintenance and protect against possible erosion damage to the Arroyo Seco Channel.

CONCLUSION

Please return one adopted copy of this letter to Public Works, Programs Development Division.

Respectfully submitted,

Gail Farber

GAIL FARBER
Director

GF:SA:re

Enclosures

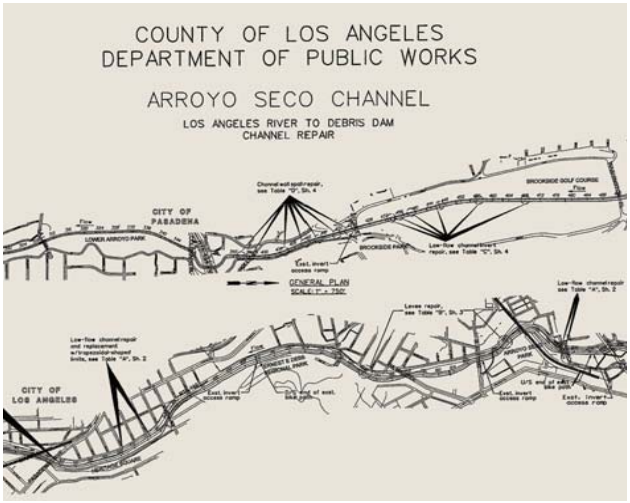
c: Chief Executive Office (Lari Sheehan)
County Counsel
Executive Office

August 2009

FINAL

Arroyo Seco Channel Repair Project

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION



prepared for:
Los Angeles County Department of Public Works
Programs Development Division
900 South Fremont Avenue
Alhambra, CA 91803

ARROYO SECO CHANNEL REPAIR PROJECT

Final Initial Study and Mitigated Negative Declaration

Prepared for:
County of Los Angeles
Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

Prepared by:
EDAW, Inc.
515 South Flower Street, 9th Floor
Los Angeles, CA 90071

August 2009

ARROYO SECO CHANNEL REPAIR PROJECT
FINAL MITIGATED NEGATIVE DECLARATION

The Arroyo Seco Channel Repair Project Draft Initial Study/Mitigated Negative Declaration (Draft IS/MND) was circulated for public review between June 25, 2009 and July 24, 2009. During this public review period, no comment letters were received from a public agency and one comment letter was received from a private citizen. No changes to the Draft IS/MND are required in response to the comment, and no new mitigation measures have been added.

This Final IS/MND includes the Draft IS/MND sections, as well as two new sections. Section 6, Response to Comments, was added and includes a copy of the one Draft IS/MND comment letter and corresponding responses; and Section 7, Mitigation Monitoring and Reporting Program, was added and provides a checklist to fulfill the project's mitigation monitoring and reporting requirements under the California Environmental Quality Act (CEQA).

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1 INTRODUCTION

The County of Los Angeles Department of Public Works (DPW) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to address the environmental effects of the proposed Arroyo Seco Channel Repair Project (proposed project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 et. seq. and the State CEQA Guidelines California Code of Regulations (CCR) §15000 et.seq. DPW is the CEQA lead agency for this project.

The proposed project involves repairs on portions of the Arroyo Seco Channel (Channel) in the cities of Pasadena, South Pasadena, and Los Angeles. The proposed project is described in detail in Section 2.0, Project Description. The proposed project would ensure the Channel is safe for stormwater and municipal runoff and for its main function as a flood control facility for the Arroyo Seco Watershed.

1.1 CEQA PROCESS

This IS/MND has been prepared pursuant to the CEQA Guidelines, including Sections 15063, 15070, and 15071. This document summarizes and addresses the results of the IS prepared to determine if any significant environmental effects would occur from the proposed project. In accordance with the CEQA statutes and Guidelines for circulation of a Negative Declaration, a 30-day public review period for this IS/MND began on June 25, 2009 and concluded on July 24, 2009. The Draft IS/MND was specifically distributed to interested or involved public agencies, organizations, and private individuals for review. In addition, the Draft IS/MND was available for general public review at:

Location	Address	Hours
County of Los Angeles Department of Public Works Programs Development Division	900 South Fremont Avenue 11th Floor Alhambra, CA 91803	Monday -Thursday 7:15 AM - 6:00 PM
Pasadena Central Library	285 East Walnut Street Pasadena, CA 91101	Monday - Thursday 9:00 AM – 9:00 PM Friday 9:00 AM – 6:00 PM Saturday 1:00 PM – 5:00 PM
South Pasadena Public Library	1100 Oxley Street South Pasadena, CA 91030	Monday - Wednesday 11:00 AM – 9:00 PM Thursday - Friday 10:00 AM – 6:00 PM Saturday 10:00 AM – 5:00 PM Sunday 1:00 PM – 5:00 PM
Los Angeles Public Library Lincoln Heights Branch	2530 Workman Street Los Angeles, CA 90031	Monday and Wednesday 10:00 AM – 8:00 PM Tuesday and Thursday 12:00 PM – 8:00 PM Friday and Saturday 10:00 AM – 6:00 PM

During the 30-day review period, the public had the opportunity to provide written comments on the information contained within the Draft IS/MND. The public comments on the Draft IS/MND and responses to public comments have been incorporated into the Final IS/MND. The Los Angeles County Board of Supervisors (Board) will use the Final IS/MND for all environmental decisions related to this project. Prior to approving a project, the Board will consider the project in conjunction with comments

received during the review period. A project will only be approved when the Board "finds that there is no substantial evidence that the project will have a significant effect on the environment and that the IS/MND reflects the lead agency's independent judgment and analysis." When adopting an IS/MND, a monitoring program must also be adopted to ensure implementation of mitigation measures required as a condition of approval.

1.2 DOCUMENT FORMAT

This IS/MND contains seven sections. Section 1, Introduction, provides an overview of the proposed project and the CEQA environmental documentation process. Section 2, Project Description, provides a detailed description of project objectives and components. Section 3, Initial Study Checklist, presents the CEQA checklist for all impact areas and mandatory findings of significance. It presents the environmental analysis for each issue area identified on the environmental checklist form. If the proposed project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the proposed project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. Section 4, References, provides a list of reference materials used during the preparation of the IS/MND, and Section 5, List of Preparers, provides a list of key personnel involved in the preparation of the IS/MND. Section 6, Response to Comments, provides the comment letters received during the 30-day public review period for the Draft IS/MND, followed by the responses from DPW. Section 7, Mitigation Monitoring and Reporting Program, provides a checklist to fulfill the project's mitigation monitoring and reporting requirements under CEQA.

The environmental analysis included in Section 3 is consistent with the CEQA Initial Study format presented earlier in the section. Impacts are separated into the following categories:

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less than Significant After Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less than Significant Impact. This category is identified when the project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

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2 PROJECT DESCRIPTION

2.1 PROJECT SUMMARY

The DPW proposes to repair portions of the Channel. The 10-mile Channel was constructed from 1934 to 1937 for flood control of the Arroyo Seco Watershed. The 22-mile long Arroyo Seco drains an approximately 47-square mile sub-watershed of the Los Angeles River Watershed, roughly two-thirds from the San Gabriel Mountains. The Channel requires repairs to correct damage from erosion that impede proper flood control.

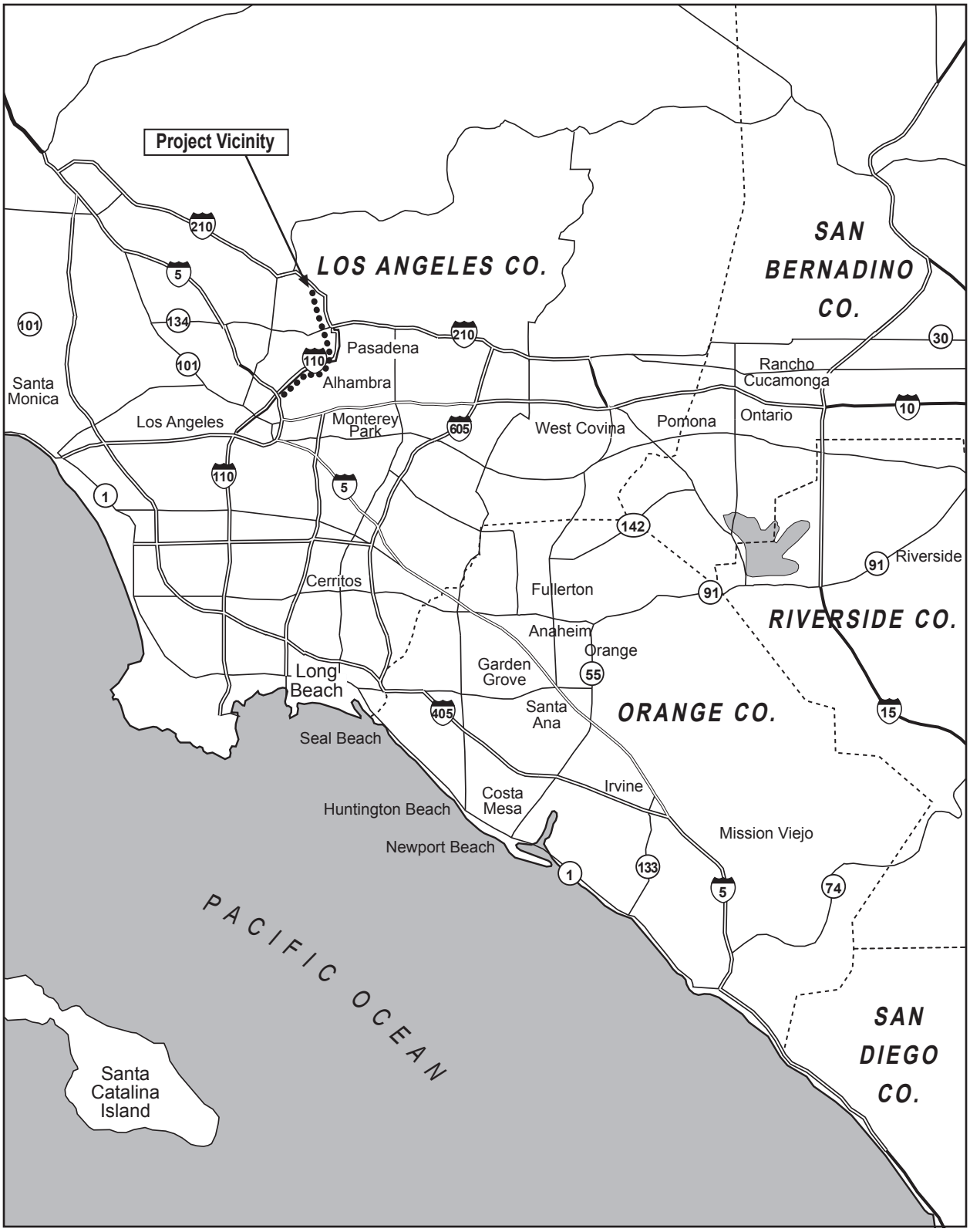
2.2 PROJECT LOCATION

The Channel flows from north to south and is located in the cities of Pasadena, South Pasadena, and Los Angeles (see Figure 2-1, Regional Location Map). The project sites are located along the approximately 10-mile long Channel, extending from the Devil's Gate Dam, near the Foothill Freeway (I-210) in Pasadena to the Los Angeles River, near the Golden State Freeway (I-5) in the City of Los Angeles (see Figure 2-2, Project Location Map). The Channel is bordered by parks, open space, the Pasadena Freeway (SR 110), parking lots, and industrial areas, with residential and commercial development adjacent to the primarily open areas that surround the Channel.

2.3 PROJECT BACKGROUND AND OBJECTIVES

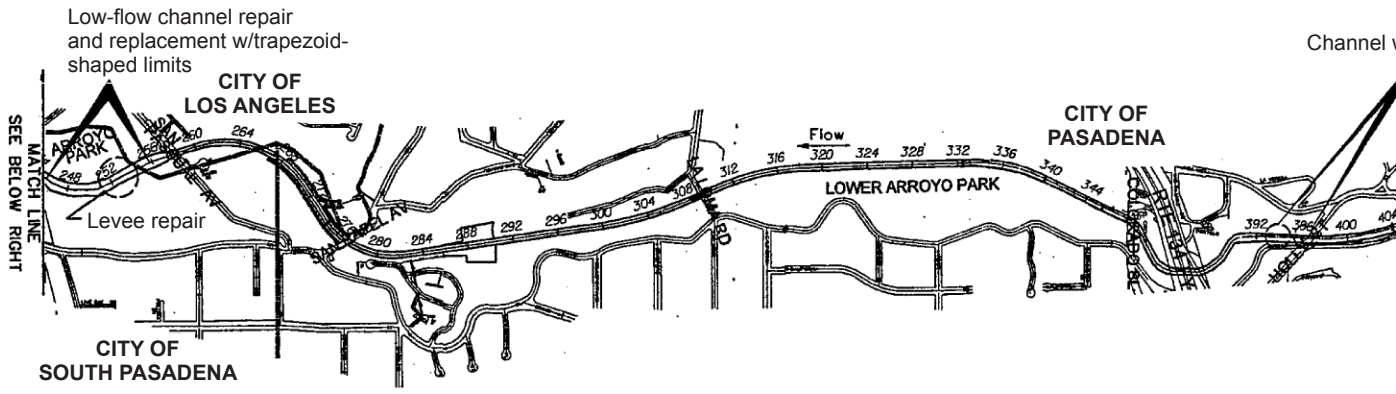
The DPW maintains the stone-mortared and concreted-lined channel, which varies in width between 40 and 80 feet. The Channel meanders from the Devil's Gate Dam south to the Los Angeles River, with portions of straight stretches. The Channel is trapezoidal and rectangular in design, varying by section, with vertical walls under bridge crossings. The Channel floor varies in thickness, reaching a maximum thickness of 24-inches at bridge locations. A low-flow drain lying in the center of the floor also varies in width and depth. In some cases, it is a box-type channel drain and in other cases, it is a gently sloped depression lined with smooth concrete. For a small segment beginning at the Pasadena Bridge overcrossing, the low flow channel is not lined. In many parts of the Channel, the portions of the floor that surround the low flow drain are lined with grouted rip-rap or embedded cobbles. In some sections of the Channel, the cobbles were added to the walls.

The proposed project would repair portions of the Channel from the debris dam near the Foothill Freeway in Pasadena to the Los Angeles River to correct damage from erosion that could potentially allow water to undermine the channel bottom and levees. Seasonal high velocity sediment-laden flows in the Channel have caused significant channel erosion. The erosion exposed some steel reinforcement and damaged some levee panels and various locations in the Channel walls. Thus, the main objective of the proposed project is to repair the Arroyo Seco Channel to ensure proper flood control management.



NORTH No Scale

Figure 2-1
Regional Location Map



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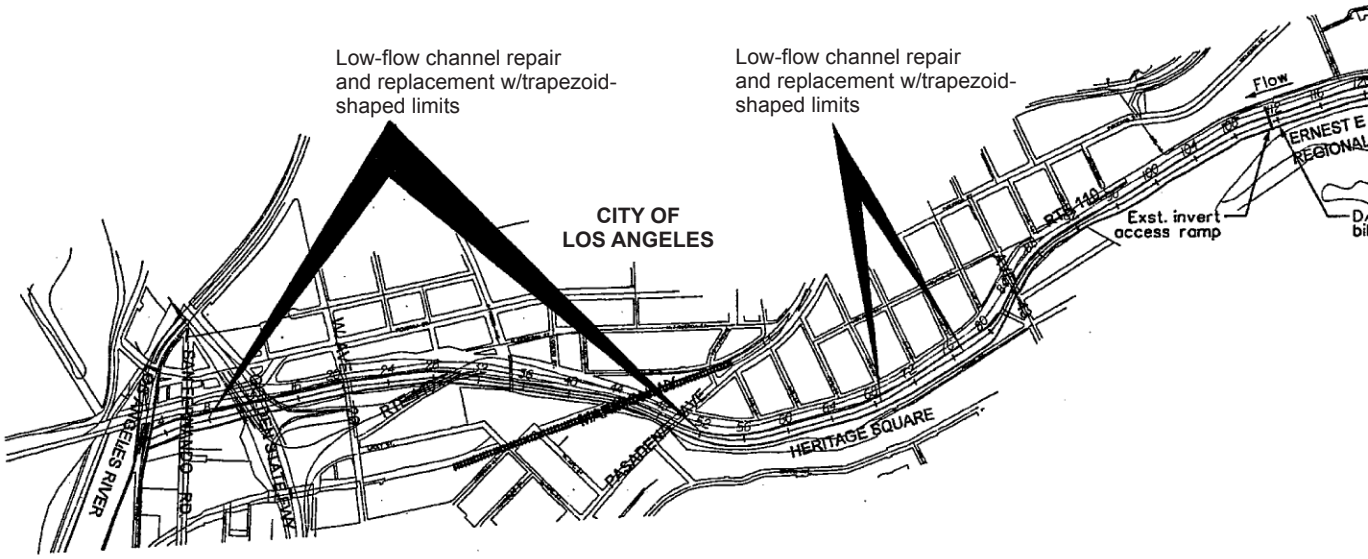

NORTH No Scale

Source: County of Los Angeles Department of Public Works, February 2007

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2.4 DESCRIPTION OF PROJECT

2.4.1 PROJECT COMPONENTS

Approximately 8,150 feet of the Channel would be repaired as part of the proposed project. The proposed project is a short-term construction project that would not result in any operational changes to the flood control of the Channel. The project components, described below, include: (1) weir reconstruction; (2) channel wall spall repair; (3) channel invert spot repair; (4) levee panel reconstruction; and (5) channel repair and replacement. The concrete finish of all repairs would match the exiting finish of the Channel. All areas of Channel construction activities are shown on Figure 2-2, Project Location Map.

WEIR RECONSTRUCTION

The existing weir structure at the Devil's Gate Dam would require weir reconstruction (spillway repair) to properly regulate the flow from the debris dam. The weir reconstruction would require approximately 13.8 cubic yards of concrete removal, 100 linear feet of saw cut, 80 feet of new steel, and 1.2 cubic yards of new concrete.

CHANNEL WALL SPALL REPAIR

The Channel wall spall repair would occur at sections of the walls near Brookside Park in Pasadena. Ten locations would be repaired at the longitudinal joints. The Channel wall spall repair would require approximately 0.56 cubic yards of concrete removal, 101 linear feet of saw cut, 16 feet of new steel, and 0.56 cubic yards of new concrete.

CHANNEL INVERT SPOT REPAIR

The Channel invert spot repair would occur at eight locations between Brookside Golf Course and Brookside Park in Pasadena. The Channel invert spot repair would require approximately 3 cubic yards of concrete removal, 165 linear feet of saw cut, and 0.84 cubic yards of new concrete.

LEVEE PANEL RECONSTRUCTION

Levee panel reconstruction would occur at three locations: (1) Arroyo Park near San Pasqual Avenue; (2) Arroyo Seco Park near Avenue 60; and (3) near the Via Marisol Exit of the Pasadena Freeway. This reconstruction is necessary at three locations because the panels are uplifted and damaged from seasonal flows along trapezoidal channel sections. The levee panel reconstruction would require approximately 93 cubic yards of concrete removal, 408 linear feet of saw cut, 4,489 feet of new steel, and 147 cubic yards of new concrete.

CHANNEL REPAIR AND REPLACEMENT

The Channel repair and replacement would occur at five locations from the City of South Pasadena to the southern end of the Channel. The low-flow channel replacement would include the replacement of the existing V-shaped channel sections with trapezoidal-shaped sections. These repairs and replacements would be 6 to 8 feet wide by 1 to 2 feet deep. The Channel repair and replacement would require approximately 2,451 cubic yards of concrete removal, 12,478 linear feet of saw cut, 87,097 feet of new steel, and 1,406 cubic yards of new concrete.

2.4.2 CONSTRUCTION SCENARIO

Construction of the proposed project would begin in the spring and is expected to continue for approximately 100 days. The short-term construction period is anticipated to use up to two crews working 8-hour days, Monday through Friday. All construction activities would occur within the Channel. The flood control operations, including flow of water down the Channel, would remain functional during the construction period. Water would be diverted at the daily construction areas to avoid construction equipment, workers, and the areas of repair and replacement. Construction equipment associated with the demolition/removal of the concrete in the Channel is anticipated to include saw cutting, a jack hammer, a Bobcat loader, and a dump truck. All demolition materials would be hauled offsite. Construction equipment associated with the repair and replacement of the concrete in the Channel is anticipated to include a water truck, a cement truck, and a pump system for grout.

All construction and operation activities associated with the proposed project would be in accordance with applicable required local, state, and federal regulations and permit requirements. In addition, the project would comply with the County's internal Stormwater Quality Management Program (SQMP) requirements, as well as develop a project specific General Conditions Specifications for the contractor to implement during the estimated 100-day construction period.

3 INITIAL STUDY CHECKLIST

1.	**Project title:**	Arroyo Seco Channel Repair Project
2.	**Lead agency:**	County of Los Angeles Department of Public Works 900 South Fremont Avenue Alhambra, California 91803-1331
3.	**Contact person:**	Reyna Soriano County of Los Angeles Department of Public Works Programs Development Division 900 South Fremont Avenue, 11th Floor Alhambra, California 91803-1331
4.	**Project location:**	Arroyo Seco Channel Cities of Pasadena, South Pasadena, and Los Angeles
5.	**General plan designation:**	Open Space (Cities of Pasadena and South Pasadena), Public Facilities (City of Los Angeles)
6.	**Zoning:**	OS (Cities of Pasadena and South Pasadena), PF-1(City of Los Angeles)
7.	**Description of project:**	The County of Los Angeles proposes repairs to the Arroyo Seco Channel throughout various locations in the concrete channel in the cities of Pasadena, South Pasadena, and Los Angeles. The proposed project also includes the reconstruction of a weir at a debris dam spillway.
8.	**Surrounding land uses/setting:**	The Channel is surrounded by the urban areas, open space, and roadways/freeways.

3.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

3.2 DETERMINATION:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. ☒

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☐

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. ☐

Reyna Soriano
Signature

06/22/2009
Date

Reyna Soriano
Associate Civil Engineer
County of Los Angeles Department of Public Works

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
1. AESTHETICS. Would the project:				
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?				X
e. Create a new source of substantial shade or shadow that would adversely affect daytime views in the area?				X

a through d. No Impact. The proposed project would not have an adverse effect on a scenic vista or damage scenic resources. Currently, the Channel consists of a concrete channel that varies in width from 40 to 80 feet. The Channel is surrounded by parks, open space, the Pasadena Freeway (SR 110), parking lots, and industrial areas. The California Department of Transportation lists and maps part of SR 110, known as the Arroyo Seco Parkway, as a Historic Parkway under the Officially Designated Scenic Highways in the project area (Caltrans 2009). Although the Channel is visible by the public from open space, including golf courses, parks, hiking trails, industrial areas, and more public accessible areas, this type of flood control channel is common in the Los Angeles region. In addition, the visual character of the Channel would not be changed by the proposed repair and replacement of concrete sections in the flood control channel. The new concrete would match the existing finish of the Channel and the types of reconstruction and replacement for the proposed project currently exist in the Channel. No lighting is associated with the proposed project; thus, no light or glare impacts would occur as a result of the proposed project. No adverse aesthetic impacts would result. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
2. AGRICULTURE RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use, or a Williamson act contract?				X
c. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

a through c. No Impact. The Proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. The proposed project site is zoned as OS (Open Space) and PF-1 (Public Facilities) and is maintained by the DPW under a flood control easement; no change in land use would occur. There are no agricultural designations associated with the site, nor are there Williamson Act contracts for the site. No agricultural resources impacts would occur. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?			X	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d. Expose sensitive receptors to substantial pollutant concentrations?			X	
e. Create objectionable odors affecting a substantial number of people?			X	

a. Less than Significant. The proposed project site is located in Central Los Angeles County, which is within the South Coast Air Basin (Basin). The Basin is a 6,600 square mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The Basin is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

Concentrations of the following air pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable and fine particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb) are used as indicators of ambient air quality conditions. These pollutants are commonly referred to as "criteria pollutants" since these are most prevalent air pollutants known to be harmful to human health, and there is extensive documentation available on health-effects criteria for these pollutants.

Criteria air pollutant concentrations are measured at 35 sites in the Basin. Both the California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (USEPA) use this type of

monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified.

The Basin is currently classified as a federal and state nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, and a federal attainment/maintenance area for CO (USEPA 2009). The Basin is classified as a state attainment area for CO; the Basin currently meets the federal and state standards for NO_2, SO_2, and Pb and is classified as an attainment area for these pollutants (ARB 2009a).

SCAQMD, with input from the Southern California Association of Governments (SCAG), is responsible for preparing the air quality management plan (AQMP), which addresses federal and state Clean Air Act requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin. Two versions (2003 and 2007) of the AQMP are in different stages of approval. The 2003 AQMP is an update to the 1997 AQMP. The 2003 AQMP employs up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources. The 2003 AQMP proposes policies and measures to achieve federal and state standards for healthy air quality in the Basin.

The 2003 AQMP updates the demonstration of attainment for the federal ozone and PM_{10}; replaces the 1997 attainment demonstration for the federal CO standard and provides a basis for a maintenance plan for CO for the future; and updates the maintenance plan for the federal NO_2 standard that the Basin has met since 1992. The 2003 AQMP was adopted by SCAQMD in August 2003 and approved, with modifications, by ARB in October 2003 (SCAQMD 2006a). ARB submitted the South Coast State Implementation Plan (SIP) to USEPA on January 9, 2004; however, this SIP has not been approved, and the 1997 AQMP with 1999 amendments remains the federally approved AQMP.

A draft version of the 2007 AQMP was released to the public, and public workshops were held in October, November, and December 2006 (SCAQMD 2006b). The 2007 AQMP was adopted by SCAQMD Governing Board on June 1, 2007. The purpose of the 2007 AQMP for the Basin is to set forth a comprehensive program that will lead the region into compliance with federal 8-hour ozone and $PM_{2.5}$ air quality standards. ARB adopted the State Strategy for the 2007 SIP, and the 2007 AQMP as part of the SIP on September 27, 2007. On November 28, 2007, ARB submitted a SIP revision to USEPA for O_3, $PM_{2.5}$, CO, and NO_2 in the Basin; this revision is identified as the 2007 South Coast SIP. The 2007 AQMP/2007 South Coast SIP demonstrates attainment of the federal $PM_{2.5}$ standard in the Basin by 2014, and attainment of the federal 8-hour O_3 standard by 2023. The SIP also includes a request of reclassification of the O_3 attainment designation from "severe" to "extreme" (ARB 2007). On February 1, 2008, ARB submitted additional technical information relative to the 2007 South Coast SIP to USEPA (ARB 2009b).

The $PM_{2.5}$ strategy outlined in the AQMP is of interest. Since $PM_{2.5}$ in the Basin is overwhelmingly

formed secondarily, the overall draft control strategy focuses on reducing precursor emission of sulfur oxides (SO_X), directly emitted $PM_{2.5}$, NO_X, and volatile organic compounds (VOC) instead of fugitive dust (SCAQMD 2006b). Based on SCAQMD's modeling sensitivity analysis, SO_X reductions, followed by directly emitted $PM_{2.5}$ and NO_X reductions, provide the greatest benefits in terms of reducing the ambient $PM_{2.5}$ concentrations.

As a result of state and local control strategies, the Basin has not exceeded the federal CO standard since 2002. In March 2005, SCAQMD adopted a CO Redesignation Request and Maintenance Plan that provides for maintenance of the federal CO air quality standard until at least 2015 and commits to revising the Redesignation Request and Maintenance Plan in 2013 to ensure maintenance through 2025 (SCAQMD 2005). SCAQMD also adopted a CO emissions budget that covers 2005 through 2015. On February 24, 2006, ARB transmitted the Redesignation Request and Maintenance Plan (including the CO budgets) to USEPA for approval. On June 11, 2007, USEPA redesignated the Basin as attainment for the federal CO standard and approved the maintenance plan amendment to the SIP for the Basin (Federal Register 2007).

Construction-Related Criteria Air Pollutant and Precursor Emissions

Construction-related emissions are described as "short-term" or temporary in duration and have the potential to represent a significant impact with respect to air quality. Construction-related activities associated with the proposed project would primarily result in project-generated emissions of criteria air pollutants (PM_{10} and $PM_{2.5}$) and ozone precursors (VOC and NO_X) from site preparation (e.g., clearing, removal of concrete); off-road equipment, material transport, and worker commute exhaust emissions; vehicle travel on unpaved roads; and other activities.

Emissions of fugitive particulate matter dust (e.g., PM_{10} and $PM_{2.5}$) are associated primarily with ground disturbance activities during site preparation (e.g., grading and excavation) and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT on- and off-site. Exhaust emissions from diesel equipment and worker commute trips also contribute to short-term increases in total particulate matter emissions, but to a much lesser extent. Emissions of O_3 precursors are primarily associated with off-road (e.g., gas and diesel) construction equipment exhaust. Worker commute trips and other construction-related activities (e.g., paving) also contribute to short-term increases in such emissions.

The proposed project involves the repair and reconstruction of approximately 8,150 feet of a 6- to 8-feet wide by 1- to 2-feet deep trapezoidal low-flow channel. The proposed project also involves reconstruction of a weir structure and repair of the edge spalling at various locations along the low-flow channel longitudinal joint, reconstruction of eight sections of invert slab along the concrete trapezoidal channel, and reconstruction of three uplifted and damaged concrete trapezoidal levee panels. The reconstruction and repairs would take place over a period of approximately 4 months, beginning in May 2010. For the purposes of this analysis, it is assumed that repairs, reconstruction, and site disturbance

(several pieces of equipment accessing portions of the Channel) would occur simultaneously, which represent worst-case conditions for projected air emissions.

SCAQMD has established emission thresholds for VOC, NO_X, CO, SO_X, $PM_{10,}$ and $PM_{2.5}$ based on conservative assumptions, to evaluate the significance of project impacts on air quality. Project-generated emissions during construction were modeled using the Urban Emissions 2007 Version 9.2.4 computer program (URBEMIS) (Rimpo and Associates 2008). Refer to Appendix A for the URBEMIS worksheets. URBEMIS incorporates ARB's EMFAC2007 model for on-road vehicle emissions and the OFFROAD2007 model for off-road vehicle emissions. Project-generated emissions were modeled based on information provided by the project description, the project engineer, and default URBEMIS settings to estimate reasonable worst-case conditions. Compliance with SCAQMD Rules is required by law; specifically, it is assumed that the construction would be performed in accordance with Rule 403, Fugitive Dust.

Project-generated construction-related emissions are summarized in Table 3-1.

TABLE 3-1
ESTIMATED CONSTRUCTION-RELATED DAILY EMISSIONS OF CRITERIA AIR POLLUTANTS AND PRECURSORS

Phase (Year)	Emissions Pounds Per Day (lb/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2010						
Total Construction Emissions	6.0	51.7	28.2	<0.1	46.3	10.7
SCAQMD Significance Threshold	***75***	***100***	***550***	***150***	***150***	***55***
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: Calculations assume compliance with SCAQMD Rule 403 for control of fugitive dust.
Refer to Appendix A for detailed assumptions and modeling output files.
Source: Data modeled by EDAW 2009.

As shown in Table3-1, the proposed project would result in construction-related daily emissions for criteria pollutants that are estimated to fall below the thresholds established for construction activities. Therefore, the construction activity would result in a less than significant impact. No mitigation is required.

Operation-Related Emissions of Criteria Air Pollutants and Precursors

Implementation of the proposed project would not result in a net increase of long-term operation-related emissions (e.g., regional VOC, NO_X, or PM_{10}, or local CO) from mobile, stationary, or area sources.

Specifically, the long-term operation of the proposed project would not generate any new vehicular trips or consequently result in any associated emissions of criteria air pollutant or ozone precursor emissions from vehicle miles traveled. Furthermore, project implementation would not result in any area source emissions or the operation of any new stationary emission sources. Thus, project-generated operation-related emissions would not conflict with or obstruct implementation of the applicable air quality plan. As a result, this impact would be less than significant. No mitigation is required.

b. Less than Significant. As discussed in 3(a) above, proposed project implementation would not result in construction- or operation-related criteria air pollutant or precursor emissions that exceed SCAQMD's significance thresholds. Thus, project-generated emissions would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. As a result, the impact would be less than significant. No mitigation is required.

c. Less than Significant. As discussed in 3(a) above, project-generated construction-related criteria air pollutant or precursor emissions would not exceed SCAQMD's significance thresholds. In addition, implementation of the proposed project would not result in a net increase of long-term operation-related emissions (e.g., regional VOC, NO_X, or PM_{10}, or local CO) from mobile, stationary, or area sources. Thus, project-generated emissions would not result in a cumulatively considerable net increase of a criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. As a result, this impact would be less than significant. No mitigation is required.

Greenhouse Gas Emissions

Less than Significant. No air district or other regulatory agency in California, including SCAQMD, has adopted a significance threshold for greenhouse gas (GHG) emissions or a specific methodology for analyzing impacts related to GHG emissions or global climate change for nonindustrial projects. ARB has released draft recommendations for both thresholds and analysis methodologies (ARB 2008); however, they have not been adopted at the time of this writing. By the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, and Senate Bill (SB) 97, however, the State of California has established GHG reduction targets and determined that GHG emissions as they relate to global climate change are a source of adverse environmental impacts in California that should be addressed under CEQA. Although AB 32 did not amend CEQA, the legislation does include language identifying the various environmental problems in California caused by global warming (Health & Safety Code, Section 38501[a].). SB 97, in contrast, did amend CEQA to require the Governor's Office of Planning and Research (OPR) to prepare State CEQA Guidelines revisions addressing the mitigation of GHGs or their consequences. In response, OPR released the Technical Advisory: CEQA and Climate Change (OPR 2008), and has released proposed CEQA Guidelines (April 14, 2009) for consideration of GHG emissions (OPR 2009).

AB 32 demonstrates California's commitment to reducing the rate of GHG emissions and the state's

associated contribution to climate change, without the intent to limit population or economic growth. Thus, to achieve the goals of AB 32, which are tied to GHG emission rates of specific benchmark years (i.e., 1990), California would have to achieve a lower rate of emissions per unit of population (per person) than it has now. Further, to accommodate future population and economic growth, the state would have to achieve an even lower rate of emissions per unit than was achieved in 1990. (The goal to achieve 1990 quantities of GHG emissions by 2020 means that this will need to be accomplished with 30 years of population and economic growth beyond 1990 in place.) Thus, future projects that would not encourage reductions in GHG emissions (or continue at "Business as Usual" emission rates) would conflict with the policy decisions contained in the spirit of AB 32, thus impeding California's ability to comply with the mandate.

The consistency with the state's requirements for GHG emissions reductions is the best metric for determining whether the proposed project would contribute to global warming. In the case of the proposed project, if the project does not conform with the state mandate to reduce GHG emissions to 1990 levels by the year 2020 and the associated increase in the amount of mass emissions is considered to be substantial, then the impact of the proposed project would be cumulatively considerable (significant). For the purposes of this analysis, the proper context for addressing climate change is the discussion of cumulative impacts, because while the emissions of one single project will not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change.

GHG emissions generated by the proposed project would predominantly be in the form of carbon dioxide (CO_2). While emissions of other GHGs, such as methane (CH_4) and nitrous oxide (N_2O), are important with respect to global climate change, the emission levels of these GHGs for the sources associated with infrastructure projects are relatively small compared with CO_2 emissions, even considering their higher global warming potential. Therefore, all GHG emissions for construction and operation are reported as CO_2.

Emission factors and calculation methods for estimating GHG emissions associated with the proposed project type have not been formally adopted for use by the state, SCAQMD, or any other air district. The construction-related GHG emissions associated with the proposed project were calculated using URBEMIS 2007 version 9.2.4 (Rimpo and Associates 2008), as shown in Appendix A.

There would be no sources of direct (e.g., natural gas combustion for space and water heating) and indirect (e.g., vehicle trips) CO_2 emissions generated by operation of the proposed project; however, a net increase in GHG emissions would result from various construction activities. Construction-related GHG emissions would be primarily generated by engine exhaust from heavy-duty construction equipment. While any increase in GHG emissions would add to the quantity of emissions that contribute to global climate change, it is noteworthy that emissions associated with construction of the proposed project would occur over a finite period of time (i.e., 100 working days). Following full buildout of the project, all construction emissions would cease. Thus, the incremental contribution to climate change by the project's

construction emissions would be minimal and would not be a considerable contribution to the cumulative global impact.

To establish additional context in which to consider the order of magnitude of project-generated construction GHG emissions, it may be noted that facilities (i.e., stationary, continuous sources of GHG emissions) that generate greater than 25,000 metric tons (MT) CO_2 per year are mandated to report their GHG emissions to ARB pursuant to AB 32. Additionally, though not adopted, ARB's preliminary draft CEQA threshold level for operational emissions from industrial projects is 7,000 MT of carbon dioxide equivalent (CO_2e) emissions per year (ARB 2008), and SCAQMD's draft threshold level for operational emissions from commercial/residential projects is 3,000 MT of CO_2e emissions per year. SCAQMD has adopted a level of 10,000 MT of CO_2e per year for industrial projects for which they serve as the lead agency. As shown in Appendix A (air quality calculations/URBEMIS worksheets), estimated GHG emissions associated with construction of the proposed project would be approximately 5,226 pounds per day (237 metric tons of CO_2 in total over the 100-day working period). Absent any air quality regulatory agency–adopted threshold for GHG emissions, it is notable that the proposed project would generate substantially fewer emissions than 25,000 metric tons CO_2 per year and all other recommended and adopted operational threshold levels discussed above. This information is presented for informational purposes, and it is not the intention of LADPW to adopt 25,000 metric tons CO_2 per year as a numeric threshold. Rather, the intention is to put project-generated GHG emissions in the appropriate statewide context in order to evaluate whether the project's contribution to the global impact of climate change is considered substantial.

Because construction-related emissions would be temporary and finite in nature, and negligible in magnitude, the proposed project's GHG emissions would not be a considerable contribution to the cumulative global impact, and therefore, would be less than significant. No mitigation is required.

d. Less than Significant.

Criteria Air Pollutant and Precursor Emissions

The proposed concrete repairs and replacement would take place along sections of the Channel in the cities of Pasadena, South Pasadena, and Los Angeles, in the County of Los Angeles. Sensitive receptors along the project site include residences at various locations along the approximately 10-mile project site. As discussed in 3(a) above, proposed project implementation would not result in construction- or operation-related criteria air pollutant or precursor emissions that exceed SCAQMD's significance thresholds. Thus, project generated emissions of criteria air pollutants and precursors would not expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be less than significant. No mitigation is required.

Toxic Air Contaminant Emissions

Short-Term Construction-Related Emissions

Construction activities of the Channel would result in short-term generation of diesel exhaust emissions from the use of off-road diesel equipment required for demolition, concrete removal and replacement, and other construction activities, in addition to diesel-fueled on-road haul trucks used for hauling demolition debris and construction material. Particulate exhaust emissions from diesel-fueled engines (diesel PM) were identified as a toxic air contaminant (TAC) by ARB in 1998. The dose to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (Salinas, pers. comm., 2004).

The duration of mobilized equipment used near sensitive receptors located along the Channel would be short (100 working days or approximately 4 months). In addition, mobile equipment would travel briefly along the roadways and would not operate near (within approximately 500 feet of) any one receptor for more than a several days at a time. The proposed project would represent less than 0.5% of the 70-year exposure period for any nearby sensitive receptor in the area. SCAQMD does not have any current guidance on TAC emissions from mobile equipment, or a threshold of significance for exposure to emissions from such equipment, from short-term construction activities. In addition, diesel PM is highly dispersive and studies have shown measured concentrations of vehicle-related pollutants, including ultra-fine particles, decrease dramatically within approximately 300 feet of the source (Zhu and Hinds 2002; ARB 2005). Thus, because the use of mobilized equipment would be temporary in combination with the dispersive properties of diesel PM and the distance to the closest sensitive receptor for each site, construction-related TAC emissions would not be anticipated to expose sensitive receptors to substantial pollutant concentrations. As a result, short-term construction-related emissions would be less than significant. No mitigation is required.

Long-Term Operation-Related Emissions

With respect to mobile-source TAC emissions, implementation of the proposed project would not result in a net increase of long-term operation-related emissions. Specifically, the long-term operation of the proposed project would not result in any commute trip TAC emissions. Furthermore, project implementation would not result in the operation of any new major stationary emission sources or place any sensitive receptors near any existing TAC sources. Thus, project-generated operation-related TAC emissions would not expose sensitive receptors to substantial pollutant concentrations. As a result, no long-term operation-related would result. No mitigation is required.

e. Less than Significant. The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of

sensitive receptor. Although offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

The proposed project would result in diesel exhaust emissions from on-site construction equipment during demolition, reconstruction/repair activities, and hauling activities. The diesel exhaust emissions would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. People potentially affected by odors include residences located along the proposed project corridor. In addition, the proposed project would not include the long-term operation of any new sources of odor or place any sensitive receptors near any existing odor sources. Thus, the proposed project would not create objectionable odors affecting a substantial number of people. As a result, this impact would be less than significant. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
4. BIOLOGICAL RESOURCES. Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

a through f. No impact. The proposed project would not have a substantial adverse effect on any species, riparian habitat, and wetlands, nor would it conflict with any local policies or ordinances or any adopted habitat conservation plans. The proposed short-term construction activities would all occur within the concrete Channel, which does not contain any vegetation or habitat. Some bird species may utilize the water flowing down the Channel, but no suitable habitat exists in the flood control corridor. During construction activities, water would be diverted away from the construction areas to allow for the uninterrupted flow of the Channel. No adverse biological resources impacts would result from the proposed project. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
5. CULTURAL RESOURCES. Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?		X		
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?			X	
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d. Disturb any human remains, including those interred outside of formal cemeteries?			X	

a. Less than Significant Impact After Mitigation Incorporated. The Arroyo Seco Channel is eligible for the National Register as a historic resource. The Channel is a historically significant structure that is associated with the development of the Los Angeles Basin. Prior to its channelization, the Arroyo Seco stream meandered south of Pasadena through northeast Los Angeles, to the Los Angeles River near Elysian Park. The channeling of waters throughout the Los Angeles Basin was pivotal in the regional development of agriculture and ranching. The Channel was constructed in the 1930s through the Works Progress Administration, the New Deal program that employed millions in public works projects during the Great Depression. Built in tandem with the adjacent Arroyo Seco Parkway, the Channel was designed to reflect the meandering path of the Arroyo Seco canyon. The Channel retains most of its distinctive historic features including its concrete construction, winding path, low-flow drain, and nine bridges associated with it. The approximately 10-mile Channel embodies an era of progressive public works projects that were significant in the history of Pasadena and Los Angeles, and it expresses the design, materials, and workmanship associated with the Works Progress Administration. It was designed to evoke a natural setting for a highly functional structure that allowed regional development and an accompanying parkway to develop.

Because of the historic significance of the Channel and proposed alterations to this resource, a Memorandum of Agreement between the California Office of Historic Preservation and the U.S. Army Corps of Engineers specifies that the potential historic impacts of the proposed project requires a Historic American Engineering Record to mitigate repairs and replacement of concrete in the Channel. The

Memorandum of Agreement was signed by representatives of the U.S. Army Corps of Engineers and the California Office of Historic Preservation, with the concurrence of the DPW (see Appendix B). With implementation of mitigation measure C-1 below, historic resource impacts of the proposed project would less than significant.

Mitigation Measure

C-1 Prior to project construction, the County of Los Angeles Department of Public Works shall submit a Historic American Engineering Record to the California Office of Historic Preservation and the U.S. Army Corps of Engineers for approval.

b through d. Less Than Significant Impact. The proposed project would not directly or indirectly cause a substantial adverse change to an archaeological or paleontological resource or geologic feature, or disturb any human remains. The proposed construction activities would not involve any subsurface ground disturbing activities. However, in accordance with CEQA Section 15064.5, if a unique archaeological or paleontological resource is discovered during construction activities, the contractor shall halt construction activities in the immediate area and notify the DPW. The DPW shall retain a qualified archaeologist or paleontologist, depending on the type of resource, to make an immediate evaluation of the significance and appropriate treatment of the resource. The qualified archaeologist or paleontologist shall recommend the extent of monitoring necessary to ensure the protection of any other resources that may be in the area. Construction activities may continue on other parts of the project site while evaluation and treatment of unique archaeological or paleontological resources takes place. The impact would be less than significant. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
6. GEOLOGY AND SOILS. Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b. Result in substantial soil erosion, loss of topsoil, or changes in topography or unstable soil conditions from excavation, grading, or fill?				X
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

a(i) through (iii). Less Than Significant Impact. The Alquist-Priolo Earthquake Fault Zone for the Raymond Hill Fault traverses the region near the center of the project site. Liquefaction hazard zones are mapped in the project area (Tetra Tech 2008). However, the proposed project only involves short-term construction in the Channel, which is designed to comply with the existing earthquake standards, and does not involve the development of any new structures. In addition, the proposed project would not result in the relocation of any people near the project site. Therefore, people or structures would not be exposed to potentially adverse effects due to rupture of a known earthquake fault or strong seismic ground shaking as

a result of the proposed project. The impact would be less than significant, and no mitigation is required.

a (iv). No Impact. According to the State of California Seismic Hazard Zones Map, the project site is not located near an area containing a potential for landslides (California Department of Conservation 1999a; 1999b). The project site topography is essentially flat and has no landslide potential due to the absence of slopes on or adjacent to the site and due to the fact that the Channel is concrete with no exposed soil. No impact would result, and no mitigation is required.

b through d. No Impact. The proposed project would not result in soil erosion, cause soil to become unstable as a result of the project, or cause substantial risk to life or property. Currently, the Channel consists of a concrete channel that varies in width. The proposed project would repair and replace sections of the Channel with concrete and no sections would expose soil for more than a day during the construction activities. Because the proposed project would only involve short-term construction and would not disturb the soil under the concrete, there would be no impact on geologic units or soils on the project site. No mitigation is required.

e. No Impact. The proposed project would not involve the use of septic tanks or alternative waste water disposal system. No impact would result, and no mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
7. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

a and b. No Impact. The short-term construction activities of the proposed project would not involve the use of acutely hazardous materials or substances. The proposed project would not involve the transport, storage, use, or disposal of hazardous materials for the short-term construction period. If any hazardous materials are required during the proposed repair and replacement activities, compliance with local, state, and federal regulations would be required to ensure the safe transport such materials. No

impact would result, and no mitigation is required.

c and d. No Impact. The proposed project would not involve the emission of hazards materials or handling of acutely hazardous materials or substances within one-quarter mile of an existing or proposed school. In addition, the proposed project site is not included on a list of hazardous materials sites compiled by the California Department of Toxic Substance Control (DTSC) pursuant to Government Code Section 65962.5 (DTSC 2009). No impact would result, and no mitigation is required.

e and f. No Impact. The Bob Hope Burbank Airport is located approximately 15 miles west of the project site, and El Monte Airport, a general aviation facility is located approximately 12 miles to the east (Rand McNally & Company 2008). The project site is not located within an airport land use plan, within two miles of a public airport or public use airport, or within the vicinity of a private airstrip. Therefore, implementation of the proposed project would not result in safety hazard related to airports. No mitigation is required.

g. No Impact. The proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan. No changes to the access would result from implementation of the proposed project. No mitigation is required.

h. No Impact. The proposed project would not expose people or structures to wildland fire. The proposed project consists of concrete repair and replacement of the Channel. Because all proposed construction activities would occur within the Channel, the construction workers would not be exposed to wildland fire during the short-term construction period. No impact would result, and no mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
8. HYDROLOGY AND WATER QUALITY. Would the project:				
a. Violate any water quality standards or waste discharge requirements?			X	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?			X	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f. Otherwise substantially degrade water quality?				X
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j. Inundation by seiche, tsunami, or mudflow?			X	
a. Less Than Significant Impact. The proposed project consists of concrete repair and replacement of				

the Channel. This activity would not generate hazardous or unusual wastewater discharges, or involve any activity that could result in violation of water quality standards. Short-term construction activities of the proposed project would comply with existing National Pollutant Discharge Elimination System (NPDES) requirements, including the use of the identified Best Management Practices. The County of Los Angeles is a co-permittee under the NPDES stormwater permit covering Los Angeles County (NPDES No. CAS004001). Compliance with these mandatory standard requirements and procedures would ensure the impact would be less than significant. No mitigation is required.

b. No Impact. The proposed project would not involve the consumption of water nor the installation of any subsurface feature that would impede groundwater movement. Thus, the project would not substantially deplete groundwater supplies nor interfere with groundwater recharge. No impact would result, and no mitigation is required.

c and d. Less Than Significant Impact. During construction activities, water would be diverted away from the construction areas to allow for the uninterrupted flow of the Channel. After construction activities on a repair or replacement section are complete the water diversion would be returned to the existing flow of the Channel. No increase in the rate or amount of surface runoff would occur during construction or after project implementation. No adverse drainage impacts would result from the proposed project. No mitigation is required.

e and f. No Impact. During construction activities, water would be diverted away from the construction areas to allow for the uninterrupted flow of the Channel. The rate of water flow would not be altered due to the water diversion around construction areas. Water quality would not be impacted by the proposed project. As stated in 8(a) above, the Best Management Practices that are required by the NPDES permit would be implemented to ensure water quality would be maintained in the Channel. No impact would result, and no mitigation is required.

g and h. No Impact. The proposed project would repair and replace sections of the Channel. The Channel is located within a flood control easement that the DPW maintains. No housing or structures would be constructed as part of the proposed project. No impact would result, and no mitigation is required.

i. Less Than Significant Impact. During the short-term construction activities in the Channel construction workers would be exposed to the risks of flooding in the Channel. As part of the project specifications, an evacuation plan would be required by the construction contractor for emergency routes to be identified in all sections of the Channel where repairs or replacement would occur. Compliance with County requirements would ensure a less than significant impact. No mitigation is required.

j. Less Than Significant Impact. The proposed project would not be subject to mudflows due to the flat topography surrounding the project site. Tsunamis are not possible due to the inland location of the project site. The Channel would not have the potential to create a seiche because the Channel typically

does not convey enough water for such an event to occur. The impact would be less than significant. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
9. LAND USE AND PLANNING. Would the project:				
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
a through c. No Impact. The proposed project would repair and replace sections of the Channel. No changes to land use would occur through implementation of the proposed project. The proposed project site is not subject to any habitat conservation plan or natural community conservation plan. Thus, the proposed project would not result in any impact to land use and planning. No mitigation is required.				
10. MINERAL RESOURCES. Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
a and b. No Impact. The proposed project would not include the excavation of any mineral resources throughout the project site. Additionally, the site is not located within a mineral resource area as designated by the City of Los Angeles General Plan, the City of Pasadena General Plan, and the City of South Pasadena (City of Los Angeles 2001; City of South Pasadena 1976; City of South Pasadena 1998). Accordingly, the proposed project would not result in the loss of availability of minerals and no impacts to mineral resources would occur. No mitigation is required.				

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
11. NOISE. Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

a. Less than Significant Impact

Acoustic Fundamentals

Acoustics is the scientific study that evaluates perception, propagation, absorption, and reflection of sound waves. Sound is a mechanical form of radiant energy, transmitted by a pressure wave through a solid, liquid, or gaseous medium. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise; consequently, the perception of sound is subjective in nature, and can vary substantially from person to person.

A sound wave is initiated in a medium by a vibrating object (e.g., vocal chords, the string of a guitar, or the diaphragm of a radio speaker). The wave consists of minute variations in pressure, oscillating above and below the ambient atmospheric pressure. The number of pressure variation cycles occurring per second is referred to as the frequency of the sound wave and is expressed in hertz.

Directly measuring sound pressure fluctuations would require the use of a very large and cumbersome range of numbers. To avoid this and have a more useable numbering system, the decibel scale was introduced. A sound level expressed in decibels is the logarithmic ratio of two like pressure quantities, with one pressure quantity being a reference sound pressure. For sound pressure in air the standard reference quantity is generally considered to be 20 micropascals (µPa), which directly corresponds to the threshold of human hearing. The use of the decibel is a convenient way to handle the million-fold range of sound pressures to which the human ear is sensitive to. A decibel is logarithmic; as such it does not follow normal algebraic methods and cannot be directly added. For example, a 65 decibel (dB) source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100 fold increase in acoustical energy.

The loudness of sound preserved by the human ear is dependent primarily on the overall sound pressure level and frequency content of the sound source. The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. The standard weighting networks are identified as A through E. There is a strong correlation between the way humans perceive sound and A-weighted sound levels, (abbreviated dB). For this reason the dB can be used to predict community response to environmental and transportation noise. Sound levels expressed as dB in this section are A-weighted sound levels, unless noted otherwise.

A number of sources, including mobile sources (transportation noise sources), such as automobiles, trucks, and airplanes; and stationary sources (non-transportation noise sources), such as construction sites, machinery, and commercial and industrial operations can generate noise. As acoustic energy spreads

through the atmosphere from the source to the receiver, noise levels attenuate (decrease) dependent on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers (walls, building facades, berms). Noise generated from mobile sources generally attenuate at a rate of 3 to 4.5 dB per doubling of distance (dB/DD). Stationary noise sources spread with more spherical dispersion patterns which attenuate at a rate of 6 to 7.5 dB/DD.

Atmospheric conditions such as wind speed, turbulence, temperature gradients, and humidity may additionally alter the propagation of noise and affect levels at a receiver. Furthermore, the presence of a large object (barrier) between the source and the receptor can provide significant attenuation of noise levels at the receiver. The amount of noise level reduction or "shielding" provided by a barrier is primarily dependent upon the size of the barrier, the location of the barrier in relation to the source and receivers, and the frequency spectra of the noise. Natural barriers such as berms, hills, or dense woods, and manmade features such as buildings and walls may be used as noise barriers.

The intensity of environmental noise changes over time, and several different descriptors of time-averaged noise levels are used for the proposed project. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors most often used to describe environmental noise that are applicable to the proposed project are defined below:

L_{max} (Maximum Noise Level): The highest A/B/C weighted integrated noise level occurring during a specific period of time.

L_{eq} (Equivalent Noise Level): The energy mean (average) noise level. The steady state sound level which, in a specified period of time contains the same acoustical energy as a varying sound level over the same time period.

City of Los Angeles Noise Regulations

The City of Los Angeles Municipal Code (LAMC) codifies regulations for mobile and stationary noise sources, including construction-related noise through a Noise Ordinance. The proposed project is subject to the Noise Ordinance as described below.

City of Los Angeles Noise Ordinance

Chapter IV, Article 1, Section 41.40 of the LAMC indicates that no person, other than an individual home owner engaged in the repair or construction of his/her single-family dwelling, shall perform any construction or repair work of any kind or perform such work within 500 feet of land so occupied before 7:00 a.m. or after 6:00 p.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on any Saturday or on a federal holiday, or at any time on any Sunday.

The LAMC also specifies the maximum noise level of powered equipment. Any powered equipment that

produces a maximum noise level exceeding 75 dB at a distance of 50 feet is prohibited. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means the above noise limitation cannot be met despite the use of mufflers, shields, sound barriers, and/or any other noise reduction device or techniques during the operation of equipment.

City of Pasadena Noise Regulations

The City of Pasadena Municipal Code (PMC) codifies regulations for mobile and stationary noise sources, including construction-related noise through a Noise Restrictions Ordinance. The proposed project is subject to the Noise Restrictions Ordinance as described below.

City of Pasadena Noise Restrictions Ordinance

Chapter 9.36 Section 70 of the PMC indicates that no person shall perform construction or repair work and/or operate any of the listed construction equipment within a residential district or within a radius of 500 feet at any time other than as listed below:

1. From 7:00 a.m. to 7:00 p.m. Monday through Friday;
2. From 8:00 a.m. to 5:00 p.m. on Saturday;
3. Operation of any of the listed construction equipment is prohibited on Sundays and holidays.

The PMC also specifies the maximum noise level of powered equipment. Any powered equipment that produces a maximum noise level exceeding 85 dB at a distance of 100 feet is prohibited.

City of South Pasadena Noise Regulations

The City of South Pasadena Municipal Code (SPMC) codifies regulations for mobile and stationary noise sources, including construction-related noise through a Noise Ordinance. The proposed project is subject to the Noise Ordinance as described below.

City of South Pasadena Noise Ordinance

The City of South Pasadena noise ordinance provides noise guidelines and standards for significant sound generators. Chapter 19A of the SPMC, Noise Regulations, limits building construction activities including the operation of any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist between the hours of 7:00 p.m. and 8:00 a.m. on Mondays through Saturdays, and on Sundays before 10:00 a.m. and after 7:00 p.m. within a residential zone or within a radius of 500 feet. These standards are provided to limit noise during sensitive time periods.

Taking into account the most conservative language of each code, Los Angeles, Pasadena, and South Pasadena Municipal Codes indicates that no construction or repair work shall be performed between the hours of 6:00 p.m. and 7:00 a.m. of the following day on any weekday, before 8:00 a.m. or after 5:00 p.m.

on any Saturday, or at any time on any Sunday. Section 112.05 of the Los Angeles Building Code specifies the maximum noise level of powered equipment or powered hand tools. Any powered equipment or powered hand tool that produces a maximum noise level exceeding 75 dB at a distance of 50 feet from construction and industrial machinery shall be prohibited. However, the equipment noise limitation shall not apply where compliance is technically infeasible.

Construction noise levels at and near the proposed project would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Table 3-2 shows noise levels associated with various types of construction related equipment at 50 feet from the noise source compiled by FTA (2006) and used in the Roadway Construction Noise Model (RCNM) used to estimate construction noise for the proposed project.

TABLE 3-2 REPRESENTATIVE CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Typical Noise Level 50 feet from source (dB)
Backhoe	80
Concrete Saw	90
Concrete Pump	82
Pneumatic Tool (Chipping Hammer)	85
Generator	81
Dump Truck	84
Front-end Loader	80

Source: FTA 2006

The magnitude of construction noise impacts depends on the type of construction activity, the noise level generated by various pieces of construction equipment, the distance between the activity and noise sensitive receivers, and any shielding effects that might result from local barriers, including topography. A reasonable worst-case assumption is that the three loudest pieces of equipment (in this case a concrete saw, chipping hammer and dump truck) would operate simultaneously. Sound levels from construction activities as a function of distance were estimated using RCNM under the worst-case assumption based on the noise levels summarized in Table 3-2.

The estimated maximum, short-duration noise level of all three pieces of equipment operating simultaneously is 84 dB L_{max}, also calculated using RCNM. However, the maximum noise level would not be continuous, nor would it be typical of noise levels throughout the construction period and equipment would likely operate briefly at full power before moving to different parts of the work area.

The existing noise environment within the project area is primarily influenced by surface-transportation

noise emanating from vehicular traffic on I-210, State Highway 134, SR 110, and I-5. Noise levels adjacent to major highways like the Foothill Freeway often exceed 70 dB, which is usually characterized as a moderately loud noise level.

The sensitive receptors closest to the project site are single-family residences along West Holly Street near Brookside Park in Pasadena, the closest of which is approximately 65 feet away to the west of repair areas in the channel, and residences along Homer Street near Heritage Square in Los Angeles, approximately 130 feet to the east of repair areas in the channel.

The average noise level of the residences approximately 65 feet away is estimated to be 80 dB, with a maximum noise level of 84dB, calculated using RCNM. These measurements account for noise attenuation resulting from the topography and natural vegetation surrounding the residences at the West Holly Street location, as determined by aerial photography and available topographic data. The average noise level of the residences approximately 130 feet away is estimated to be 70 dB, with a maximum noise level of 74dB, calculated using RCNM. These measurements account for line-of-sight obstruction and the natural barrier that the channel itself would provide, with work occurring towards the center of the channel in the Homer Street location. The combined average noise level for both locations would not exceed acceptable noise levels (85 dB or less at a distance of 100 feet for City of Pasadena and 75 dB or less for the City of Los Angeles). As a result, the impact would be less than significant. No mitigation is required.

Because the proposed project would be a short-term construction project, no operational noise impacts would occur. After project implementation, the operational noise of the Channel would be similar to the existing condition.

b. Less than Significant Impact.

Vibrations can be interpreted as energy transmitted in waves through the soil mass. These energy waves generally dissipate with distance from the vibration source, due to spreading of the energy and frictional losses. The energy transmitted through the ground as vibration, if great enough, can result in structural damage to buildings. To assess the potential for structural damage associated with vibration from construction activities, the vibratory ground motion in the vicinity of an affected structure is measured in terms of peak particle velocity (ppv), typically in units of inches per second (in/sec).

Although peak particle velocity is appropriate for evaluating the potential of building damage, it is not suitable for evaluating human response. It takes some time for the human body to respond to vibration signals (FTA 2006). In a sense, the human body responds to an average vibration amplitude. Because the net average of a vibration signal is zero, the root mean square (rms) amplitude is used to describe the "smoothed" vibration amplitude. The rms of a signal is the square root of the average of the squared amplitude of the signal.

Vibration Thresholds

Tables 3-3 and 3-4 present various vibration magnitudes provided by the California Department of Transportation (Caltrans) and U.S. Department of Transportation, Federal Transit Administration (FTA) and their related effect on structures and humans, respectively. These thresholds are used for comparison purposes in the analysis provided below.

TABLE 3-3
STRUCTURAL VIBRATION DAMAGE THRESHOLDS

Structure and Condition	Maximum ppv (in./sec.)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
Source: Caltrans 2004

TABLE 3-4
HUMAN RESPONSE GROUND VIBRATION

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

VdB = Velocity Decibels
Source: FTA 2006

Although it is possible for vibration from construction projects to cause building damage, vibration from construction activities are almost never of sufficient amplitude to cause more than minor cosmetic damage to buildings (FTA 2006). Groundborne vibration generated by construction projects is usually highest during pile driving, soil compacting, jackhammering, and demolition-related activities. The only piece of equipment likely to cause vibration that would be used during construction of the proposed project is a jackhammer, which has a typical peak particle velocity of 0.035 in/sec and a vibration level of approximately 79 VdB at 25 feet away (FTA 2006).

The vibration data provided above and thresholds provided in Tables 3-2 and 3-3 indicate that jackhammer vibration levels would be below the threshold of damage at distances ranging beyond 50 feet. The nearest vibration sensitive receptors would be the residences along West Holly Street near Brookside

Park and the Foothill Freeway in Pasadena, approximately 50 feet to the west of repair areas in the Channel. At this distance, these receptors would be exposed to vibration levels of approximately 70 VdB (0.124 ppv in/sec) during jackhammering/demolition activities. This is below the threshold for structural damage to buildings or the identified human annoyance threshold. Thus, the identified receptors would not be exposed to substantial vibration during project construction. Subsequent phases would generally use equipment that would produce less vibration or would be farther away; thus, vibrations during other phases would be less than the predicted level for jackhammering at the identified receptor points. Therefore, the proposed project would not expose local sensitive receptors to substantial adverse effect resulting from groundborne vibrations. As a result, the impact would be less than significant. No mitigation is required.

Because the proposed project would be a short-term construction project, no operational vibration impacts would occur.

c. No Impact. The proposed project does not involve any additional operation-related noise-impacts. Operation of the project site would remain the same as the existing condition following construction, and no permanent increase in ambient noise levels in the vicinity of the project site would occur due to increased vehicle operations. No mitigation is required.

d. Less than Significant Impact. Implementation of the proposed project would result in temporary increases in ambient noise levels. However, the project area is within developed areas of downtown Los Angeles, Pasadena, and South Pasadena where existing ambient noise levels are often higher than 70 dB. The temporary increase in ambient noise levels during construction near residences would not exceed the thresholds of 85 dB at a distance of 100 feet or 75 dB or less at a distance of 50 feet. As a result, the impact would be less than significant. The following recommendations to reduce maximum noise levels during construction would help reduce temporary noise levels peaks further.

- Temporary noise barriers may be erected along construction site boundaries to shield local residences from construction activities where line-of-sight barriers exist.
- Sound blankets around impact equipment (i.e. chipping hammers or concrete saws) may be used.
- Contractors may schedule construction activities to avoid simultaneous use of several pieces of high noise level-emitting equipment within 150 feet of residences, to the extent practicable.
- If traffic control and construction signs (where lane detours are required for work near roadways) that require power for lighting or flashing are located within 100 feet of residences, the source of power should be batteries, solar cells, or another quiet source.

Gas- or diesel-fueled internal combustion engines shall not be used.

e and f. No Impact. The Bob Hope Burbank Airport is located approximately 15 miles west of the project site and El Monte Airport, a general aviation facility is located approximately 12 miles to the east (Rand McNally & Company 2008). The project site is not located within an airport land use plan, within two miles of a public airport or public use airport, or within the vicinity of a private airstrip. Therefore, implementation of the proposed project would not result in excessive noise impacts related to airports. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
12. POPULATION AND HOUSING. Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

a through c. No Impact. The proposed project would repair and replace sections of the Channel. The Channel is located within a flood control easement that the DPW maintains; no housing or people would be displaced during construction activities. No residential and/or commercial land uses are proposed as part of this project; thus, the proposed project would not contribute to any significant population changes. No impacts to population and housing would result. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
13. PUBLIC SERVICES.				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?				X
ii) Police protection?				X
iii) Schools?				X
iv) Parks?				X
v) Other public facilities?				X

a(i) through (v). No Impact. The proposed project would repair and replace sections of the Channel. The project would not result in additional persons or any activity that would create a substantial demand on public services. Therefore, the proposed project has no potential to require the construction of new government facilities, including fire and police facilities, schools, and parks. No impact would result, and no mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
14. RECREATION.				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X

a and b. No Impact. The proposed project would repair and replace sections of the Channel. Demand for recreational facilities is primarily generated by permanent residents. There are no residential units on the project site and none are provided as part of the proposed project. Therefore, the proposed project would not result in an increase in the use of local or regional park or recreational facilities. As such, the proposed project would not impact recreational parks or facilities or require the construction or expansion of recreation facilities. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
15. TRANSPORTATION/TRAFFIC. Would the project:				
a. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			X	
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e. Result in inadequate emergency access?				X
f. Result in inadequate parking capacity?			X	
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

a and b. Less Than Significant Impact. The proposed project would repair and replace sections of the Channel. During short-term construction, it is anticipated that up to two crews could work simultaneously, with only a limited amount of workers (eight to ten workers total). The few pieces of construction equipment required would not interfere with local traffic patterns. The construction equipment would not be transported to the project site daily. The majority of the traffic generated by the proposed project would be from construction worker trips to and from the project site. Due to the short-term construction period, approximately 100-working days, the trips generated by construction workers would be less than significant. Therefore, the proposed project would not result in an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. The impact would be less than significant. No mitigation is required.

c. No Impact. The Bob Hope Burbank Airport is located approximately 15 miles west of the project site and El Monte Airport, a general aviation facility is located approximately 12 miles to the east (Rand McNally & Company 2008). The proposed project would not include any features that would result in an increase or alteration of existing air traffic patterns. Therefore, the proposed project would not result in adverse impacts related to air traffic patterns. No mitigation is required.

d. No Impact. The proposed project would not involve any roadway construction or alteration to any existing roads. Thus, the project would not introduce hazardous design features, provide incompatible uses, or alter the existing intersections. No impact would occur. No mitigation is required.

e. No Impact. The proposed project would not interfere with emergency access routes in the area. Construction would only occur within the Channel. No changes to the emergency access would result from implementation of the proposed project. No mitigation is required.

f. Less Than Significant Impact. The proposed project is anticipated to use up to ten workers per day. The construction workers would park near the project site in compliance with parking regulations of the cities of Los Angeles, Pasadena, and South Pasadena, if parking on city streets is required. Otherwise, construction workers would park near the Channel as shown on project specifications and authorized by DPW. Because the proposed project would be short-term over an approximately four month period, parking over the 10-mile project site would create nominal impact on the surrounding land uses. The proposed project would result in a less than significant impact on parking capacity. No mitigation is required.

g. No Impact. No changes to the existing alternative transportation systems are planned as a part of the proposed project. The proposed project would not result in the elimination of existing bus or bicycle facilities. Therefore, the proposed project would not result in any conflicts with policies, plans, or programs that support alternative transportation. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
16. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			X	

a through e. No Impact. Implementation of the proposed project would not result in or require the construction of new water or wastewater treatment facilities. The proposed project would repair and replace sections of the Channel. The proposed project would not generate wastewater or result in a demand for additional water supply, or drainage facilities. No impact would result. No mitigation is required.

f and g. Less Than Significant Impact. The construction contractor would be required to submit a haul routes map and identify a disposal site for the concrete that would be removed. The haul routes and disposal site identification would be required by the DPW as part of the project specifications. The disposal of concrete would comply with all federal, state, and local statutes and regulations related to solid waste. The impact would be less than significant. No mitigation is required.

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
17. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.			X	
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X	

a. Less Than Significant Impact After Mitigation Incorporated. As described above, the proposed project would not impact biological resources. The proposed project would potentially result in impacts to the Channel, which is considered a historic resource by the California Office of Historic Preservation. Mitigation measure C-1 is required by a Memorandum of Understanding between the California Office of Historic Preservation and the U.S. Army Corps of Engineers for the proposed project. After implementation of mitigation measure C-1, the impact to historic resources would be less than significant.

b. Less Than Significant Impact. The proposed project would not result in significant impacts that cannot be mitigated to a less than significant level. The analysis in this Initial Study has determined that the proposed project would not have any individually limited or cumulatively considerable impacts.

c. Less Than Significant Impact. The proposed project would not result in substantial adverse effects on human beings, either directly or indirectly. Mitigation measures are provided to reduce the project's potential effects on cultural resources and noise below the level of significance. No additional mitigation measures are required. Adverse effects on human beings resulting from implementation of the proposed project would be less than significant.

4 REFERENCES

California Department of Conservation

1999a California Geological Survey (CGS) (formerly the Division of Mines and Geology), Official Map of Seismic Hazard Zones, Los Angeles Quadrangle. March 25.

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California Air Resources Board (ARB)

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5 LIST OF PREPARERS

The following firms, individuals, and agency staff contributed to the preparation of this MND:

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Honey Walters, Senior Air Quality/Noise Specialist
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Melissa Hatcher, QA/QC

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6 RESPONSE TO COMMENTS

The Draft IS/MND was distributed for public review on June 25, 2009, initiating a 30-day public review period pursuant to CEQA and its implementing guidelines. During this public review period, no comment letters were received from public agencies and one comment letter was received from a citizen. A copy of the letter is provided in this section, as well as DPW responses to the comment contained in the letter.

Reyna Soriano
Arroyo Seco Channel Repair Project
County of Los Angeles
Program Development Division
900 S. Fremont Ave. 11th Floor
Alhambra, CA 90803-1331

Re- Arroyo:

It seams you have excess funds: Give it back to people, Give it to Cities in need, Give it to State of California "Broke" Do not waste as usual on project not emergency. 1-1

Thank you,

J.R. Sarkisian

LETTER 1: J.R. SARKISIAN

Comment No.	Response
1-1	The comment has been noted for DPW's consideration during review and approval of the proposed project. Because this comment does not address the environmental analysis provided in the Draft IS/MND, no further response is necessary.

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7 MITIGATION MONITORING AND REPORTING PROGRAM

Public Resources Code, Section 21081.6 requires that mitigation measures identified in environmental review documents prepared in accordance with CEQA be implemented after a project is approved. Therefore, this Mitigation Monitoring and Reporting Program (MMRP) has been prepared to ensure compliance with the adopted mitigation measures during preparation of the final plans and specifications and project construction phase of the Arroyo Seco Channel Repair Project.

The Los Angeles County Department of Public Works is the lead agency responsible for implementation of the mitigation measures identified in the MND. The MMRP includes the following information:

- the phase of the project during which the required mitigation measure must be implemented;
- the phase of the project during which the required mitigation measure must be monitored;
- the enforcement agency; and
- the monitoring agency.

The MMRP also includes a checklist to be used during the mitigation monitoring period. The checklist will verify the name of the monitor, the date of the monitoring activity, and any related remarks for the required mitigation measure.

TABLE 7-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement / Monitoring Agency	Verification of Compliance		
				Initial	Date	Remarks
CULTURAL RESOURCES						
C-1. Prior to project construction, the County of Los Angeles Department of Public Works shall submit a Historic American Engineering Record to the California Office of Historic Preservation and the U.S. Army Corps of Engineers for approval.	Pre-construction	Pre-construction	DPW			

APPENDICES

APPENDIX A
Air Quality Worksheets

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\kuhny\Desktop\Arroyo Seco\Arroyo Seco AQ.urb924

Project Name: Arroyo Seco AQ

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	5.95	51.71	28.24	0.02	44.85	2.74	46.34	9.38	2.52	10.74	5,225.95

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 5/3/2010-5/21/2010 Active Days: 15	**5.95**	**51.71**	**28.24**	**0.02**	11.68	**2.74**	14.43	2.44	**2.52**	4.96	**5,225.95**
Demolition 05/03/2010-05/21/2010	5.95	51.71	28.24	0.02	11.68	2.74	14.43	2.44	2.52	4.96	5,225.95
Fugitive Dust	0.00	0.00	0.00	0.00	11.62	0.00	11.62	2.42	0.00	2.42	0.00
Demo Off Road Diesel	4.97	39.62	21.55	0.00	0.00	2.25	2.25	0.00	2.07	2.07	3,348.97
Demo On Road Diesel	0.92	11.96	4.59	0.02	0.05	0.49	0.54	0.02	0.45	0.47	1,628.19
Demo Worker Trips	0.07	0.12	2.10	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.79

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Time Slice 5/24/2010-8/23/2010 Active Days: 66	3.34	26.45	17.25	0.01	**44.85**	1.49	**46.34**	**9.38**	1.37	**10.74**	3,443.09
Building 05/24/2010-08/23/2010	2.80	21.21	15.59	0.01	0.05	1.30	1.36	0.02	1.20	1.22	2,872.10
Building Off Road Diesel	2.25	16.15	7.91	0.00	0.00	1.09	1.09	0.00	1.00	1.00	1,512.01
Building Vendor Trips	0.41	4.80	3.38	0.01	0.03	0.20	0.23	0.01	0.18	0.19	849.23
Building Worker Trips	0.14	0.25	4.30	0.01	0.02	0.01	0.04	0.01	0.01	0.02	510.86
Mass Grading 05/24/2010-08/23/2010	0.54	5.24	1.66	0.00	44.80	0.18	44.99	9.36	0.17	9.53	570.99
Mass Grading Dust	0.00	0.00	0.00	0.00	44.80	0.00	44.80	9.36	0.00	9.36	0.00
Mass Grading Off Road Diesel	0.53	5.23	1.40	0.00	0.00	0.18	0.18	0.00	0.17	0.17	539.89
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.01	0.02	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.10

Phase Assumptions

Phase: Demolition 5/3/2010 - 5/21/2010 - Concrete removal

Building Volume Total (cubic feet): 276588

Building Volume Daily (cubic feet): 27659

On Road Truck Travel (VMT): 384.15

Off-Road Equipment:

2 Air Compressors (106 hp) operating at a 0.48 load factor for 8 hours per day

2 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Mass Grading 5/24/2010 - 8/23/2010 - site disturbance

Total Acres Disturbed: 2.24

Maximum Daily Acreage Disturbed: 2.24

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

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On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 5/24/2010 - 8/23/2010 - Channel and weir reconstruction

Off-Road Equipment:

2 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day

2 Pumps (53 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

APPENDIX B
Memorandum of Agreement

CLEAN WATER ACT (33 USC. § 1344)
FOR THE
ARROYO SECO CHANNEL REPAIR PROJECT,
LOS ANGELES COUNTY, CALIFORNIA

WHEREAS, the U. S. Army Corps of Engineers, Los Angeles District ("USACE") under the authority of section 404 of the Clean Water Act on June 5, 2007, conditionally verified applicability of Nationwide Permit 3 (the "Permit") for discharges of dredged and/or fill material associated with the County of Los Angeles Department of Public Works' ("Permittee") improvements to the Arroyo Seco Flood Control Channel along the Los Angeles River for Corps file no. No. 200700094-VEN (the "Undertaking"); and

WHEREAS, the USACE has determined that the Area of Potential Effects ("APE") contains the portion of the Arroyo Seco Flood Control Channel (P-19-186859) within the project area, a property eligible for listing on the National Register of Historic Places under Criterion A; and

WHEREAS, the USACE has determined the Undertaking will have an adverse effect on the Arroyo Seco Flood Control Channel (P-19-186859) within the APE, and has consulted with the California State Historic Preservation Office ("SHPO") and the Advisory Council on Historic Preservation ("Council"), pursuant to 36 C.F.R. Part 800, regulations implementing Section 106 of the National Historic Preservation Act of 1966, as amended ("NHPA") (16 U.S.C. § 470f); and

WHEREAS, the Council elected not to participate in this MOA; and

WHEREAS, the USACE has consulted with the Permittee, the Fernandeno Tatviam Band of Mission Indians, LA City/County Native American Indian Community, the Kitanemuk & Yowlumne Tejon Indians, the San Fernando Band of Mission Indians, the Gabrieleno/Tongva San Gabriel Band of Mission Indians, the Gabrielino/Tongva Nation, and the Gabrielino Tongva Indians of California regarding the effects of the Undertaking on historic properties, and has invited them to sign this MOA as concurring parties (hereinafter collectively referred to as "Concurring Parties").

NOW, THEREFORE, the USACE and the SHPO (collectively, referred to as "Signatories" or "Parties") shall ensure that the Undertaking is implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties until this MOA expires or is terminated.

II. TREATMENT OF HUMAN REMAINS OF NATIVE AMERICAN ORIGIN

The Signatories agree that they will ensure that Native American burials and related items discovered during the implementation of this MOA and the Undertaking will be treated by the Permittee in accordance with the requirements of 7050.5 (b) of the California Health and Safety Code. If, pursuant to 7050.5 (c) of the California Health and Safety Code, the county coroner/medical examiner determines that the human remains are or may be of Native American origin, then the Signatories agree that they will ensure that the discovery is treated by the Permittee in accordance with the provisions of 5097.98 (a)-(d) of the California Public Resources Code.

III. DISCOVERIES AND UNANTICIPATED EFFECTS

Either Signatory, at its discretion, may hereunder assume any discovered property to be eligible for inclusion in the National Register, and that compliance with this stipulation shall satisfy the requirements of 36 C.F.R. § 800.13(a)(2). The USACE agrees to amend its Permit to add a special condition requiring the Permittee to provide immediate notification if unanticipated cultural resources are discovered during project construction, to temporarily halt those activities, and to take steps to ensure that the area of the discovery is protected and secured. The USACE agrees to follow the procedures outlined in 36 C.F.R. § 800.13 if an unexpected archaeological discovery is made. Pursuant to 36 C.F.R. § 800.13, the USACE will notify SHPO and Concurring Parties within forty-eight (48) hours of the discovery. The notification shall describe the actions proposed by the USACE to resolve the adverse effects. The SHPO shall respond within forty-eight (48) hours of the notification. The USACE will ask the Concurring Parties to also respond within forty-eight (48) hours of the notification pursuant to 36 C.F.R. § 800.13. The USACE shall take into account their recommendations, and then carry out the appropriate actions.

Interior's *Professional Qualifications Standards* (36 C.F.R. Part 61) in the appropriate disciplines.

2. *Historic Preservation Standards*. All activities prescribed by Stipulations I, II, and III of this MOA shall conform to applicable standards and guidelines established by the Secretary of the Interior and SHPO.

B. CONFIDENTIALITY

The Parties acknowledge that historic properties covered by this MOA are subject to the provisions of Section 304 of the NHPA relating to the disclosure of archaeological site information and having so acknowledged, will ensure that all actions and documentation prescribed by this MOA are consistent with Section 304 of the NHPA.

C. RESOLVING OBJECTIONS

1. Should SHPO object to the manner in which the terms of this MOA are implemented, the USACE will consult with the SHPO to resolve the objection. If the USACE determines that the objection cannot be resolved, the USACE shall forward all documentation relevant to the dispute, including the USACE's proposed resolution, to the Council for their assistance in resolving the dispute. In the event the Council provides timely advice or comments, the USACE, prior to reaching a final decision on the dispute, shall prepare a written response that takes into account the recommendation or comment provided by the Council pertaining to the subject of the dispute, and provide them a copy of this written response.

2. The USACE's responsibility to carry out all actions under this MOA that is not the subject of a dispute will remain unchanged.

3. The USACE may authorize any action subject to objection under this stipulation to proceed after the objection has been resolved in accordance with the terms of this stipulation.

D. AMENDMENTS

Either Signatory may propose that this MOA be amended, whereupon the Signatories will consult for no more than 30 days to consider such amendment. The amendment process

proposing termination shall, in writing, notify the other Signatory, explain the reasons for proposing termination, and consult with the other Signatory for at least 30 days to seek alternatives to termination. Such consultation shall not be required if the USACE proposes termination because the Undertaking no longer meets the definition set forth in 36 C.F.R. § 800.16(y).

2. Should such consultation result in an agreement on an alternative to termination, then the Signatories shall proceed in accordance with the terms of that agreement.

3. Should such consultation fail, the Signatory proposing termination may terminate this MOA by promptly notifying the other Signatory in writing. Termination hereunder shall render this MOA without further force or effect.

4. If this MOA is terminated hereunder, and if the USACE determines that the Undertaking will nonetheless proceed, then the USACE shall either consult in accordance with 36 C.F.R. § 800.6 to develop a new MOA or request the comments of the Council pursuant to 36 C.F.R. § 800.6(b)(1)(v).

F. DURATION OF THE MOA

1. Unless terminated pursuant to Stipulation IV(E), or unless it is superseded by an amended MOA, this MOA will be in effect following execution by the Signatories until the USACE, in consultation with SHPO, determines that all of its stipulations have been satisfactorily fulfilled. This MOA will terminate and have no further force or effect on the day that the USACE notifies SHPO in writing of its determination that all stipulations of this MOA have been satisfactorily fulfilled.

2. The terms of this MOA shall be satisfactorily fulfilled within five (5) years following the date of execution by the SHPO. If the USACE determines that this requirement cannot be met, the Signatories will consult to reconsider its terms. Reconsideration may include continuation of the MOA as originally executed, amendment or termination. In the event of termination, the USACE will comply with Stipulation VI(E)(4) if it determines that the Undertaking will proceed notwithstanding termination of this MOA.

G. EFFECTIVE DATE

This MOA shall take effect on the date that it has been executed by SHPO.

IN WITNESS WHEREOF, execution of this MOA by the USACE and SHPO, transmittal by the USACE to the Council in accordance with 36 C.F.R. § 800.6(b)(1)(iv), and subsequent implementation of its terms, evidences the USACE has taken into account the effects of the Undertaking on historic properties and that the USACE has satisfied its responsibilities under § 106 of the NHPA and applicable implementing regulations.

SIGNATORIES:

U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT

By: _____ Date: 3/20/2009
David J. Castanon
Chief, Regulatory Division

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: 4/6/09
Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

CONCURRING PARTIES:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

By: _____ Date: 8/11/09

Title: ASSOCIATE CIVIL ENGINEER

FERNANDENO TATAVIAM BAND OF MISSION INDIANS

By: _____ Date: _____

Title: _____

By: _____ Date: _____

Title: _____

SAN FERNANDO BAND OF MISSION INDIANS

By: _____ Date: _____

Title: _____

GABRIELENO/TONGVA SAN GABRIEL BAND OF MISSION INDIANS

By: _____ Date: _____

Title: _____

GABRIELENO/TONGVA NATION

By: _____ Date: _____

Title: _____

GABRIELINO INDIANS OF CALIFORNIA

By: _____ Date: _____

Title: _____

ENCLOSURE B

MITIGATION MONITORING AND REPORTING PROGRAM

ARROYO SECO BIKEWAY

The project includes other standard mitigation measures as discussed in Section 5 of the Mitigated Negative Declaration.

Program Management

After adoption of environmental mitigation measures by the County of Los Angeles (County) Board of Supervisors, the Department of Public Works (Public Works) shall designate responsibility for monitoring and reporting compliance with each mitigation measure. Responsibility for monitoring and reporting compliance with mitigation measures, if any, shall be designated by Public Works as appropriate.

To facilitate implementation and enforcement of this program, Public Works shall ensure that the obligation to monitor and report compliance with environmental mitigation measures is required by all project-related contracts between the County and A/E (the prime construction contractor), and any other person or entity who is designated to monitor and/or report compliance under this program during the preconstruction and construction phases.

Public Works, as appropriate, shall take all necessary and appropriate measures to ensure that each project-related environmental mitigation measure adopted is implemented and maintained.

Preconstruction

Public Works is responsible for preparing and submitting the Historic American Engineering Record to the California Office of Historic Preservation and the U.S. Army Corps of Engineers in order to mitigate repairs and replacement of concrete in the Arroyo Seco Channel.

Public Works is responsible for incorporating mitigation measures into the project design and confirming in writing that final construction drawings include all design-related mitigation measures.

Public Works is responsible for incorporating mitigation measures and confirming in writing that final construction drawings include all design-related mitigation measures.

Construction

Public Works or the prime construction contractor for the project and/or for project-related off-site improvements is responsible for constructing and/or monitoring the construction of mitigation measures incorporated in final construction documents and reporting instances of noncompliance in writing.

Public Works or the prime construction contractor for the project and/or for project-related off-site improvements is responsible for implementation and/or monitoring the implementation of mitigation measures affecting methods and practices of construction (e.g., hours of operation, noise control of machinery, etc.) and reporting instances of noncompliance in writing.

Public Works is responsible for monitoring the compliance of prime construction contractor(s) with responsibility set forth above and reporting noncompliance in writing.

Project Operation

After completion and final acceptance of the project, Public Works is responsible for monitoring and maintaining compliance with adopted mitigation measures that affect project operation.

RS:re
P:\PDPUB\EP\A\EU\PROJECTS\ARROYO SECO CHANNEL REPAIRS\6A-BOARD LETTER MIT MON PROG.DOC